

## **Challenges for the New Millennium**

### **U. S. Air Force Perspective**

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Survivability permeates the essence of aerospace forces. Aircraft survivability is essential to gaining and maintaining air superiority across the battlefield. This presentation will address the Air Force perspective of survivability by describing the battlefield, survivability capabilities of our aerospace forces and long term capabilities needed into the 21<sup>st</sup> century.

The future Battlefield for Aerospace forces must center around Air Order of Battle and Ground Order of Battle. What they will look like in the future will shape the requirements process for the Air Force and also drive the way in which we employ our forces. Rules of Engagement have always played a significant role in the conduct of our

Air Campaigns. As we continue to become more involved with our coalition forces, the political restraints intertwined into ROE proves extremely challenging.

Survivability from a capability point of view revolves around standoff, stealth and suppression of enemy air defenses (SEAD). Standoff capability allows our forces to remain at the edge of threat rings or outside of threat range. Standoff in both the horizontal and vertical dimension allows aerospace forces to employ effective weapons while not sacrificing precision. The value of stealth has been seen in the F-117 and B-2 recently in Kosovo. Although stealth allows us to shrink threat rings, it does not make us invisible. Stealth will continued to be built into our air superiority forces as seen in the F-22 and Joint Strike Fighter. SEAD, in conjunction with stealth, provides a necessary capability. The ratio of our legacy to stealthy aircraft is still great, therefore, SEAD will continue to be a necessary requirement. The Air Force is progressing from SEAD to DEAD (Destruction of Enemy Air Defenses) through improvements in targeting pods, global positioning systems, precision weapons and improved electronic warfare and information warfare. DEAD will allow us freedom of maneuver in the future battlespace.

As we head into the new millennium, several technologies are needed to maintain aerospace superiority. We will be looking to space as well as aircraft for increased target identification capability, communication/datalink improvements. Improvements in weapons to include greater range and precision and speed require hypersonic, hyperspectral and advance target recognition features. Stealth and EW will continue to be important factors in aircraft survivability, as will UAVs. Directed Energy will also prove

decisive in future conflicts. Programs such as ABL, SBL, SBIRS and Discover II are leading the way in our transition from simply an air force to an aerospace force